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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/287,332	04/07/1999	KAARE M. GAUTVIK	16777/309	6190

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FOLEY AND LARDNER
3000 K STREET NW SUITE 500
WASHINGTON, DC 200075109

EXAMINER

LANDSMAN, ROBERT S

ART UNIT

PAPER NUMBER

1647

DATE MAILED: 07/02/2003

21

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .		Applicant(s)	
	09/287,332		GAUTVIK ET AL.	
	Examiner		Art Unit	
	Robert Landsman		1647	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 38,39,41 and 57-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 38,39,41 and 57-59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Formal Matters

- A. Amendment F, filed 4/21/03, has been entered into the record.
- B. Claims 38, 39 and 41 are pending in the application. In Amendment F, Applicants added claims 57-59. Therefore, claims 38, 39, 41 and 57-59 are pending and are the subject of this Office Action.
- C. All Statutes under 35 USC not found in this Office Action can be found, cited in full, in a previous Office Action.

2. Specification

The specification is objected to for the following reasons:

- A. Page 30, line 38 is missing an “ α ” after pSS.
- B. Page 33, line 6 is missing a term in the parentheses before the term “ura3”).

3. Claim Rejections - 35 USC § 112, first paragraph – scope of enablement

A. Claims 38, 39 and 41 remain rejected and new claims 57-59 are also rejected under 35 USC 112, first paragraph, for the reasons already of record on page 2 of the Office Action dated 10/21/02. Applicants argue that the specification provides sufficient disclosure to enable a person of ordinary skill in the art to make and use the claimed invention, as seen by the disclosure of leader sequences on pages 23-26 of the specification. Applicants argue that by using these sequences, the artisan would be able to construct a microorganism using these leader sequences. Furthermore, Applicants argue that the present invention details a method for overcoming the problems regarding the degradation of PTH.

These arguments have been considered, but are not deemed persuasive. First, two of the major aims of the present invention were to construct a microorganism which showed a stable production of intact PTH as well as isolating PTH from yeast. Applicants disclose on page 4, lines 10-19 of the specification that the present invention uses a double start codon at the 5'-end of the preproPTH which may aid in increasing yield. However, this is not required in the claims, nor does this appear to be required for intact secretion of PTH in *E. coli* or in yeast. The invention appears to be focusing only on the use of a cleavable leader sequence which will allow PTH to be secreted intact. Though the specification states that numerous leader sequences can be used (page 5, lines 6-12), Applicants have only demonstrated that yeast mating factor α (page 6, lines 22-28), or an STE13 mutation (page 14, lines 20-

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35) can achieve the desired result of intact secretion. The Examiner does agree, however, that Applicants are enabled for this method in yeast, as seen in Example 8. If Applicants believe they are enabled for signal sequences other than that of MF α 1, they are required to point out exactly where in the specification they have support for this.

As stands, Applicants have provided no guidance or working examples of any signal sequence other than MF α 1 and MF α 1 with an STE13 mutation. Therefore, due to the fact that the artisan was not able to produce intact PTH using common methods in the art, it would not be predictable to the artisan which signal sequence would be effective in this method. Therefore, the breadth of the claims is also excessive since Applicants have only demonstrated two examples of signal sequences which are able to secrete intact PTH. For these reasons, the Examiner maintains that undue experimentation is required to practice the claimed invention.

4. Claim Rejections - 35 USC § 112, second paragraph

A. Claim 39 is confusing since it is not possible to have a medium consisting of only one component, in this case PTH. The phrase "consisting of" implies that PTH is the only substance in the medium. However, the use of the medium itself is considered another substance. Therefore, the claim should be amended to recite "comprising."

5. Obviousness-Type Double Patenting

A. Claims 38, 39, 41 remain rejected and new claims 57-59 are also rejected under the judicially created doctrine of obviousness-type double patenting for the reasons already of record on pages 3-4 of the Office Action dated 10/21/02. Applicants have stated that they will provide Terminal Disclaimers over US Patent No. 5,420,242, 5,010,010 and 6,146,852. Until this time, these rejections are maintained.

6. Statutory Double Patenting

A. The rejection of claim 41 under 35 USC 101 as being identical to that of claims 1 and 2 in US Patent No. 6,146,852, has been withdrawn in view of Applicants' arguments.

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7. Claim Rejections - 35 USC § 102

A. Claims 38, 39 and 41 remain rejected and new claims 57-59 are also rejected under 35 USC 102 as being anticipated by Breyel et al. for the reasons already of record on page 5 of the Office Action dated 10/21/02. Applicants argue that the extract obtained by Breyel et al. is distinct from the cell-free medium of the present invention since Breyel used sonication to lyse the cells, therefore, the medium is not cell-free since it contains all soluble contents of the lysed cells. This argument has been considered, but is not deemed persuasive. Sonication of lysates would allow for soluble material to be present in the media. However, before the cells are sonicated, it would be expected, in absence of evidence to the contrary, that some PTH would have leaked from the cells into the medium, making this fraction of the medium cell-free. Similarly, "cell-free" implies that there are no intact cells and, in the absence of a definition of "cell-free," the Examiner considers "cell-free" to not read on lysates of intact cells, since this fraction itself is not a cell.

B. The rejection of claims 38, 39 and 41 under 35 USC 102 as being anticipated by Gautvik has been withdrawn in view of the fact that this is Applicants' own work. The Examiner apologizes for this oversight.

Advisory information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Landsman whose telephone number is (703) 306-3407. The examiner can normally be reached on Monday - Friday from 8:00 AM to 5:00 PM (Eastern time) and alternate Fridays from 8:00 AM to 5:00 PM (Eastern time).

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Gary Kunz, can be reached on (703) 308-4623.

Official papers filed by fax should be directed to (703) 308-4242. Fax draft or informal communications with the examiner should be directed to (703) 308-0294.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Robert Landsman, Ph.D.
Patent Examiner
Group 1600
June 30, 2003


ROBERT LANDSMAN
PATENT EXAMINER